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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,664	12/16/2003	Vladimir M. Kabakov		2852

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EXAMINER	
BASINGER, SHERMAN D	
ART UNIT	PAPER NUMBER
3617	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/735,664	KABAKOV, VLADIMIR M.	
	Examiner	Art Unit	
	Sherman D. Basinger	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☒ Claim(s) 18-20 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 16 December 2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *marked up figure 4 of Roney*.

DETAILED ACTION

Response to Amendment

1. The amendment filed November 12, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the brief description of figures 12-15 on page 6 and the detailed description of figures 12-15 on pages 15, 15a, 15b and 16.

Applicant is required to cancel the new matter in the reply to this Office Action.

Drawings

2. The drawings filed November 16, 2004 are objected to because the lines, numbers and letters are not uniformly thick and well defined. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as

per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The new sheets of drawings filed November 12, 2004 have not been approved for entry as each contains new matter. The new matter is the shape of the gear box in figure 12, the worm 103 of figure 15, the worn gear 102 of figure 15 and the coupling 109 of figure 15.

Specification

4. The disclosure is objected to because of the following informalities: on page 8 of the specification, in line 24 "a" should be –α-.

Appropriate correction is required.

Claim Objections

5. Claims 16, 19 and 20 are objected to because of the following informalities: in claim 16, line 5 "for radial" should be –four radial-; in claim 16, line 10, the period should be a semi-colon; in claims 19 and 20 line 1 "claim 15" should be –claim 18- so as to provide antecedent basis for "said inner stator" of claim 19 and "said outer rotor" of claim 20; and the semi-colon at the end of claim 19 should be a period. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 8, 9, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Roney.

Roney discloses a method of propelling watercraft, considered to be 7 of Roney, including:

mounting at least two propelling means 15 on a watercraft with ability to be rotated around a transverse axis 5 and around at least two radial axes 2, 2 with the same speed;

rotating said at least two propelling means simultaneously around said transverse axis and around said at least two radial axes with the same speed, wherein:

said transverse axis 5 being disposed substantially perpendicular to the advancement direction of said watercraft 7;

said at least two radial axes 2, 2 being disposed substantially perpendicular to said transverse axis and can be rotated together with said at least two propelling means 15, 15 around said transverse axis 5;

each of said at least two propelling means 15 including at least one substantially flat propeller blade balanced relative to one of said at least two radial axes so that the centers of gravity of said propelling means being disposed substantially on said radial

axes (note the attached copy of figure 4 of Roney which has been marked to show what is considered to be the flat propeller blade and what is considered to be balance or counterweight for the blade so as to balance the blade on the axes 2,2.

Roney further discloses disposing said at least one substantially flat propeller Blade 15 substantially in a plane of the rotation around one of said at least two radial axes in that such a plane passes through the thickness of the blade.

Roney further discloses a propulsion apparatus for propelling watercraft, including:

at least one driving shaft 5 disposed substantially perpendicular to the advancement direction of said watercraft;

at least one planetary gearbox 12 mounted on said driving shaft and having at least two radial output shafts 2,2 disposed substantially perpendicular to said driving shaft 5 and constrained by a planetary gear 3, 3, 4 engagement to rotate with the speed of rotation of said driving shaft 5;

means 14 for rotating said planetary gearbox around the axis of said driving shaft 5, wherein:

said at least one planetary gearbox 12 includes at least one sun bevel gear 4 mounted coaxially with said driving shaft and at least two planet bevel gears 3 mounted on said at least two radial output shafts 2, 2;

at least two propelling means 15 mounted on said at least two radial output shafts 2, 2 and disposed perpendicular to the axes of

rotation of said radial output shafts 2,2;

each of said at least two propelling means includes a substantially flat propeller blade which is balanced relative to the axis of one of said radial output shaft so that the center of gravity of said propelling means been disposed on said axis of said radial output shaft.

Roney also discloses that the substantially flat propeller blade is disposed substantially in plane of rotations of said propelling means around the axis of one of the radial output shafts 2.

Roney also discloses that two of the planetary gearboxes 12 are mounted on said driving shaft 5 each of said two planetary gearboxes 12 including two said radial output shafts 2 disposed along a common axis perpendicular to the axis of said driving shaft 5 and two said propelling means mounted on said radial output shafts, wherein:

the planes of rotations of said propelling means 15 mounted on said radial output shafts of one of said to planetary gearboxes are substantially perpendicular to said planes of rotations of said propelling means mounted on said radial output shafts of another said planetary gearboxes (because each propelling means rotates in two planes each perpendicular to the other, one about axle 2 and one about axle 5, one axis of rotation of each propelling means 15 is perpendicular to another axis of rotation of another propelling means 15).

Roney also discloses a propulsion apparatus for propelling watercraft, including:

- at least one support rod 6 disposed substantially perpendicular to the advancement direction of said watercraft 7;

- at least one planetary gearbox 12 mounted on said support rod with ability to be rotated around the axis of said support rod 6, said planetary gear box 12 having at least two radial output shafts 2 disposed substantially perpendicular to said support rod 6, said radial output shafts 2 being constrained by planetary gear engagement of said planetary gearbox 12 to rotate with the speed of rotation of said planetary gearbox 12;

-at least two propelling means 15 affixed perpendicular to said two radial output shafts 2, said propelling means 15 including substantially flat propeller blades and counter-weights fixed on said propelling means and balanced so that the centers of gravity of said propelling means being disposed on the axes of said radial output shafts, said propeller blades being disposed substantially in planes of rotations of said propelling means around the axes of said radial output shafts.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Maker.

Roney does not disclose disposing the at least one substantially flat propeller blade at an acute angle with the plane of rotation around one of the at least two radial axes. Maker discloses blades in figures 8 and 9 which are twisted such that each makes an acute angle with the plane in which they rotate. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide a twist to each blade of propelling means 15 of Roney as taught by Maker so that each blade forms an acute angle with the plane in which they rotate around shafts 2. Motivation to do so is to provide a more efficient blade and propelling means.

10. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Maker.

Roney does not disclose mounting three said propelling means with ability to be rotated around said transverse axis and around three said radial axes; rotating each of said three propelling means simultaneously around said transverse axis and around one of said three radial axes with the same speed, wherein said three radial axes being disposed substantially 120 degrees from each other around said transverse axis and wherein said planetary gearbox includes three said radial output shafts

disposed substantially perpendicular to the axis of
the driving shaft and substantially 120 degrees from each other.

Maker discloses three propelling means 13 with the ability to be
rotated around a transverse axis 15 and around three radial
axes 26; rotating each of said three propelling means 13 simultaneously
around said transverse axis 15 and around one of said three radial
axes 26 with the same speed, wherein
said three radial axes 26 being disposed substantially 120
degrees from each other around said transverse axis 15 and wherein
a planetary gearbox includes three said radial output shafts 26
disposed substantially perpendicular to the axis of
the driving shaft 15 and substantially 120 degrees from each other.

In view of the teachings of Maker it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide a third bevel gear 3 of Roney, three shafts 2 of Roney and three blades 15 of Roney for each gear box 12 of Roney such that
said planetary gearbox includes three said radial output shafts
disposed substantially perpendicular to the axis of
the driving shaft and substantially 120 degrees from each other such that each of said three propelling means simultaneously rotates

around said transverse axis and around one of said three radial axes with the same speed.

Motivation to do so is to provide more propelling efficiency with three blades 15 as opposed to two blades 15.

11. Claims 5, 6, 7, 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Raimondi.

Roney does not disclose mounting at least two pairs of said propelling means with the ability to be rotated around said transverse axis and around at least two pairs of said radial axes;

rotating said two pairs of said propelling means simultaneously around said transverse axis and around said two pairs of radial axes with the same speed, and wherein each said pair of radial axes being disposed along one line perpendicular to said transverse axis;

said propelling means in each said pair of propelling means being rotated in substantially parallel planes;

one said pair of propelling means being rotated in planes which are substantially perpendicular to planes of rotation of another said pair of propeller blades.

Raimondi discloses four propelling means 44 rotating around drive axle 32, two propelling means being on the same axis and two propelling means being on an axis perpendicular to the same axis.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide two additional planet bevel gears 3, two additional radial axles 2 and two additional propelling means 15 to the gear box of Roney such that in Roney two pairs of said propelling means 15 having the ability to be rotated around said transverse axis 5 and around at least two pairs of said radial axes 2 is provided; and such that said two pairs of said propelling means are simultaneously rotated around said transverse axis and around said two pairs of radial axes with the same speed; wherein each said pair of radial axes 2 are disposed along one line perpendicular to said transverse axis, said propelling means in each said pair of propelling means being rotated in substantially parallel planes and one said pair of propelling means being rotated in planes which are substantially perpendicular to planes of rotation of another said pair of propeller blades; and wherein said two pairs of radial axes are disposed along two intercrossed lines, said intercrossed lines being perpendicular to said transverse axis and to each other.

Motivation to do so is to provide a more efficient propelling means.

Roney does not disclose disposing the transverse axis 5 on such a height over the water level that said propeller blades 15 extend into the water when they are oriented substantially downwards. Raimondi discloses his land vehicle as also being a watercraft and with his transverse axis being at such a height with respect to the water level that the propeller blades 15 extend into the water when they are oriented downwards.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify the fuselage 7 or Roney so as to be useable on water in the manner taught by Raimondi and such that the transverse axis 5 is on such a height over the water level that said propeller blades 15 extend into the water when they are oriented substantially downwards.

Motivation to do so is to make the machine of Roney more useful by making it both a flying machine and a machine useable on water so as to be a watercraft.

With regard to claim 17, the support rod 6 of Roney would also be at such a height over the water level that the propeller blades 15 would extend into the water when they are oriented downwards.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Kabakov 441.

Roney does not disclose the driving shaft 5, the at least one planetary gearbox 12 and the at least two propelling means 15 as being mounted on an outboard engine.

Kabakov discloses drive shaft 11, radial shafts 14 and 15 and propelling means 22-25 as being mounted on an outboard engine 13. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to mount the drive shaft 5, the radial shafts 2, the gear box 12 and the propelling means 15 on an outboard engine similar to that of Kabakov 441. Motivation to do so is to expand the usefulness of the propelling means disclosed by Roney.

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Kabakov 441.

Roney does not disclose four radial output shafts 2 being disposed along two intercrossed lines which are substantially perpendicular to the axis of said support rod 6 and to each other, two pairs of said propelling means 15 being mounted on said four radial output shafts, wherein the planes of rotations of one pair of said propelling means around said radial output shafts are substantially perpendicular to the planes of rotations of another pair of said propelling means around said radial output shafts; the planetary gearbox including a sun bevel gear mounted on the support rod 6 and at least one planet bevel gear engaged with said sun bevel gear and four identical bevel gears engaged with each other.

Kabakov discloses the support rod 12, the four intercrossed axles 14 and 15, the four propelling means 22-25, the sun gear 22, the two planet gears 20 and 21 and the four identical gears 16-19.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains in view of the disclosure of Kabakov 441 to provide to each support rod 6 and gear box 12 of Roney four radial output shafts 2 being disposed along two intercrossed lines which are substantially perpendicular to the axis of said support rod 6 and to each other, two pairs of said propelling means 15 being mounted on said four radial output shafts, wherein the planes of rotations of one pair of said propelling means around said radial output shafts are substantially perpendicular to the planes of rotations of another pair of said propelling means around said radial output shafts; the planetary gearbox including a sun bevel gear mounted on the support rod 6 and at least one planet bevel gear engaged with said sun bevel gear and four identical bevel gears engaged with each other.

Motivation to do so is to provide a more efficient propelling means.

Allowable Subject Matter

14. Claims 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Goldenberg is cited to show the counterweight 40. Therriault is

cited to show the gear box of figures 7-9. Kabakov 458, 666, 742 and WO 02/08054

are cited as applicant's prior patents or publications.

16. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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(Date)

Typed or printed name of person signing this certificate:

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Signature: _____

Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 703-308-1139. The examiner can normally be reached on M-F (6:00-2:30 ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sherman D. Basinger
Primary Examiner
Art Unit 3617

12/10/04

sdb
12/10/04

attachment of office action of 12/10/04

Apr. 3, 1923. 1,450,454.

A. B. RONEY.

LEVER CONTROLLED PADDLE ACTION FLYING MACHINE.

FILED DEC. 8, 1921. 2 SHEETS—SHEET 2.

Fig. 3.

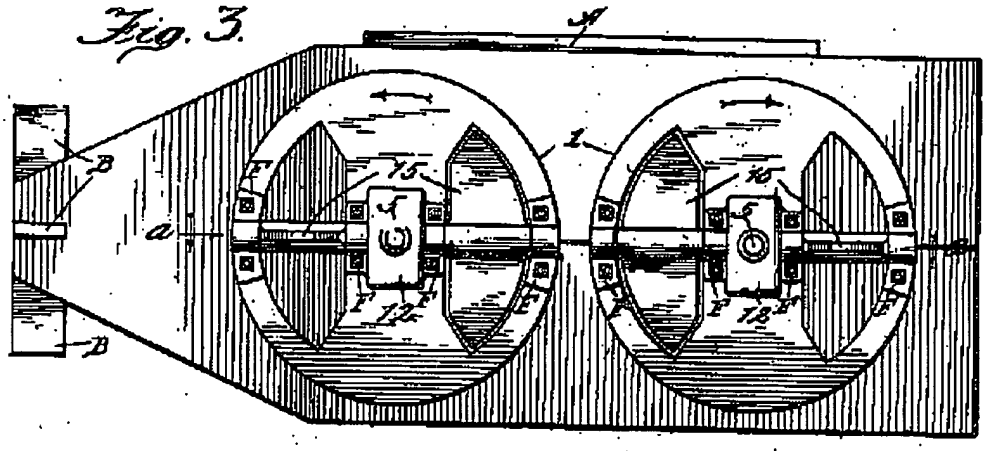
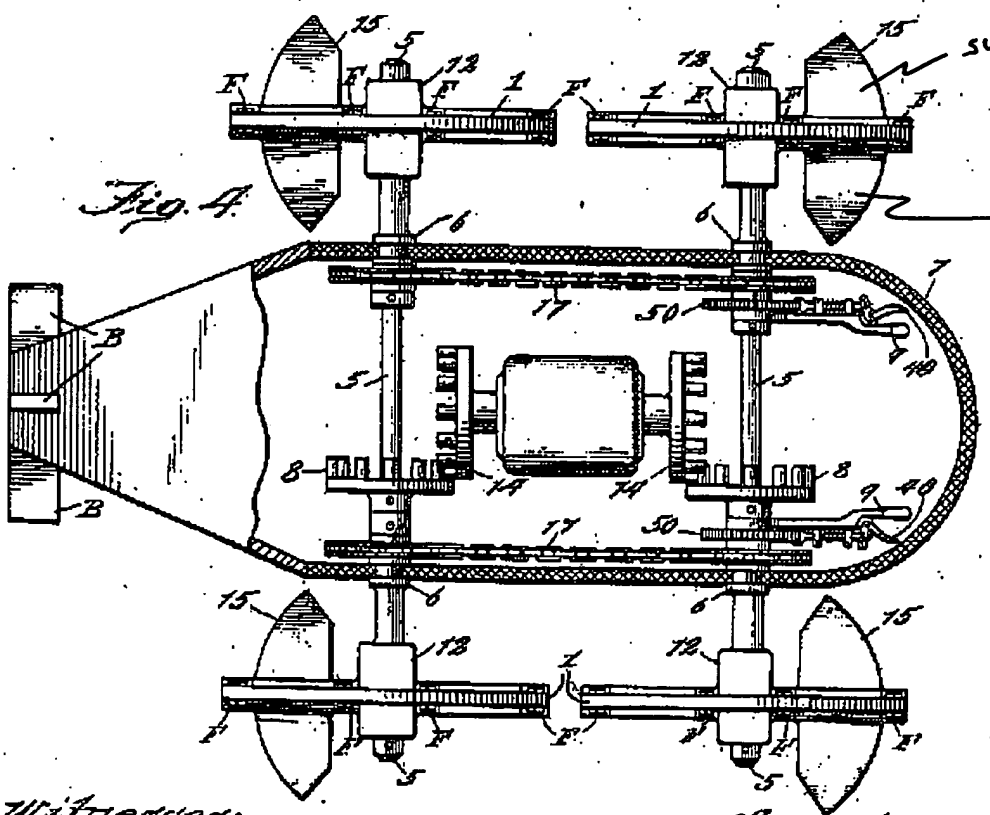


Fig. 4.



substantially flat propeller blade

balances propeller blade (counter weight)

Witnesses:

Kenneth E Perry

Inventor:

Alexander B Roney